Doug Wilson, Interim Director

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California Department of Water Resources
Division of Integrated Regional Water Management
Financial Assistance Branch
Post Office Box 942836
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June 3, 2011

Attn: Trevor Joseph
Re: Inyo Mono IRWMP Proposal Application

Dear Mr. Joseph

Thank you very kindly for the opportunity to address the California Department of Water Resources concerning the Inyo Mono Integrated Regional Water Management Plan Proposal Application. The application process proved to be challenging yet illuminating and a rewarding learning experience as well. There are concerns that I was wondering if you could kindly address.

Work Plan

"But through all the tasks associated with this project none state how many meters will be installed." [1,2]. See Budget, Attachment 4 Budget, Table 7 Budget Narrative. 145 meters will be installed with Project 11.

"Also, page 76, sub-task 9.3 is a question and states 'Are meters installed with arrow towards customer…? This task doesn't explain any work that will be performed." [1,2]. Sub-Task 9.3 is Performance Testing and Demobilization. Performance testing seems to be best associated with project inspection. My intent was to show the inspection thought processes I will undertake on this Project. When I get onto a job-site, I start asking myself question like: 'Is the spoil on the traffic side and 2 feet away from the edge of trench? Are rocks from the excavation on the opposite side of the ditch so they are not put back into the backfill? What kind of soil is the excavation encountering?' and others pertinent to the job. When I am satisfied with the construction scene, then I can settle into note-taking. Likewise with the meter replacement project. I will ask myself questions like I listed in the application. Historically, Inyo County Public Works has never employed a written inspection procedure although we definitely prepare daily inspection reports and inspection reports by bid item, daily time sheets of contractor staff on the work, etc. We document the manpower, start/finish time, equipment on the job, equipment and manpower used per bid item, etc. We can certainly prepare an inspection Acceptance Procedures document that describes what we will be looking for when we inspect. Usually, this is accomplished through a handout (Preconstruction Minutes) I prepare for the preconstruction meeting with the contractor and all relevant parties. All the documentation we normally prepare and new documentation if you desire can certainly be forwarded to the California Department of Water Resources, as has been stated in my documentation on page 40 in the table under **Tasks,** as well in my Exhibit C and Exhibit D for the projects.

Provided was a table of equivalences correlating the dollar amounts for DWR's Budget Categories in Attachment 4 Table 7 with the steps Inyo County must undertake to complete a project from inception to Notice of Completion in Attachment 5 Schdedule. This table and supporting text apportioned or broke out the dollar figures in Attachment 4 Table 7 Budget Category figures across the steps we follow to complete a project shown in the Schedule, attachment 5. This was the case with all three projects, effectively interlinking Exhibit A Attachment 3 and Work Plan with Budget Attachment 4 and Schedule Attachment 5.

Budget

"For Projects 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14 the applicant did not provide task budgets reflecting the work items in the work plan." [1,2]. See the above discussion.

Under each Table 7(Attachment 4 and Attachment 7) for each project is a breakdown of how the costs were estimated and with the rational of how each cell amount (table entry) was justified. Again, each of these table entry amounts was apportioned across the Public Work tasks necessary to complete a project as shown above.

Schedule

"The schedule is not completely reasonable, and is not consistent with the work plan. Each of the project schedules are not presented in the same order or grouping as presented in the work plan." [1,2]. My schedules reflect the process whereby Public Works prepares plans, specifications, secures Board approval, carry out the work, and close out the project. The time between each step is standard for Public Works. "Each of the project schedules are not presented in the same order or grouping as presented in the work plan." [1,2]. Yes, in the electronic version on our website, the project schedules are presented in the same order as presented in the work plan.

Monitoring, Assessment, and Performance Measures

"Projects 3, 4, 5, 7, 10, 11, 12, and 13 do not include quantitative targets." [1,2]. Within the Attachment 7 DWR tables in Excel, I included a calculations sheet and possibly a greenhouse gas calculations sheet for each project. Quantitative targets were either there, or within the Table 11 comments or Table 16 comments I included. Quantitative targets may have also been included in the Exhibit D Attachment 8 I included for the Laws & Lone Pine Tanks project and the Laws, Independence, and Lone Pine meters project.

Economics Analysis

"Only average levels of benefits relative to costs can be realized through this proposal." (Water Supply Costs and Benefits [1,2]). "Only below average levels of benefits relative to costs can be realized through this proposal." (Water Quality and Other Expected Benefits [1,3]). This may be true for at least two substantial reasons: 1) project costs are higher in our remote area, and 2) there are many projects, some smaller than others, which will all get constructed by different contractors.

Higher project costs are demonstrated for you by considering a local project in Bishop in 2010. The Bid Summary for this project is attached, and is also available on the City of Bishop website. Also attached is an Excel spreadsheet with a cost comparison for the major components of the Bishop 2010 project (all but the service laterals) but hypothetically constructed in either Bakersfield or San Bernardino, CA. These costs were taken from the 2008 BNI Public Works Costbook [7]. These two

cities were chosen because they are the closest metropolitan areas to the Owens Valley and represent likely metropolitan areas where out of the area contractors are most likely to mobilize from. The 2008 data is actually from 2007, so the figures were escalated from 2070 figures to 2010 figures using the Los Angeles-Riverside-Orange County Bureau of Labor Statistics Urban Cost Data [5]. The analysis shows that the City of Bishop costs for Mobilization, Traffic Control, 8" Water Line, and Hydrant were $348,730 whereas the costs for equivalent tasks in Bakersfield or San Bernardino were, after adjustment for inflation $291,696. The difference, $57,034, is the cost difference attributable to construction costs in our remote area. Notice that service laterals were not included because of the unknown lengths encountered in Bishop. Also unknown were the exact traffic control measures on-site. The estimate contains what would be considered typical values.

Economies of scale do not factor favorably into the overall cost benefit ratio because for every project, there is a different contractor; whereas if one or a few contractors secured all the project contracts there possibly could be better economies of scale resulting in lower construction costs yielding a better b/c ratio.

I am puzzled that on the Proposal Evaluation; Criteria Preferences, our score was 10/10 [1,3]. Apparently, we demonstrated significant, dedicated, and well defined projects that meet multiple Program Preferences, documented the breadth and magnitude of the Program Preference implemented, and most importantly, we demonstrated a significant degree of certainty that the Program Preferences claimed can be achieved [8,28]. In other words, our proposal as a whole could be successfully completed.

We provided well defined projects; however, within the evaluation, the Work Plan, Budget, and Monitoring, Assessment, and Performance Measures were not fully addressed and not supported by thorough documentation or sufficient rational [1,1-2]. We provided enough detail to show that we demonstrated a "significant degree of certainty that program preferences could be achieved", but only enough detail that ensures some projects can be implemented. How can there only be enough detail to show that only some projects can be implemented [1,1], yet demonstrate a significant degree of certainty that Program Preferences can be achieved [8,28]?

My time allowed to complete the three water systems applications submitted was 8 working days or 64 hours total. I put about 60-80 hours of my personal time in addition to the 8 days into the applications. Assembling 3 applications in that time, I can not compete against a paid consultant charging $16,500 on average per application. Our Group approved 25 projects to forward to the application process, yet only 15 were submitted within the Proposal because proponents were lost in the application process I had some advantage over several of my peers because of my Mechanical Engineering education, although I was not good at my Engineering Economy class back in 1991.

Consider the Disadavantaged Community status. Evidently, 10% minimum of the grant award funds should be made available to disadvantaged communities [8,9]. If that's the case, then 10% of the 85 score points should be for DAC projects which meet the IRWMP Program Preferences. That's 8.5 points for DAC participation with approved projects. Evidenced by our Program Preferences score, our projects are approved. Our Group was puzzled because we could not see how DAC's were considered in the scoring. After much inspection, I saw it in the Program Preferences criteria. 1 point advance from 4 points to 5 points with a weighing factor of 2 yields 2 points out of 85 points for DAC participation. Is this the sole means of giving DAC's extra consideration? In the future, maybe you can increase the weighting factors applicable to DAC's to give consideration to DAC's.

Please consider the needs of DACs and Tribes in our area. According to the USEPA, During 2009, 9% of all water systems across the country were in Significant Noncompliance defined as violations or combination of frequent or persistent violations that are considered the most serious. Of the 9 percent, over 91 percent of these noncompliant water systems were small systems [2,11].

In 1996 small systems serving fewer than 3,300 people reported the most violations. 96% of the 15,182 community water systems with significant monitoring and reporting violations were small systems. 5 Million people are served by these systems. 82% of 5151 community water systems with an MCL and treatment Technique violation were small systems. 2.3 million people are served by these water systems. Of the 558 Small Community Water Systems, 381 reported violations [4,18]. Two of the water systems I am personally responsible for are very small from 5 services (Bishop Airport) to 19 services (Laws) while Independence (365 services) and Lone Pine (556 services) are small system. In USEPA reports, small and very small systems are lumped into small systems.

According to the EPA, "System size can be linked to a system's ability to maintain or return to compliance. In general, larger public water systems have the capability to maintain compliance more easily than small systems, and can return to compliance more quickly than small systems. This disparity is often the result of differences in financial, administrative, and technical capacity between large and small systems. Small systems have fewer users from whom to collect the funds to purchase and install needed infrastructure, and to operate and maintain the system. Because the per-user costs can appear prohibitive, small systems may charge user rates that are lower than the true cost of collecting, treating and distributing the water. Lack of funding may cause small systems to delay needed capitol improvements. Small systems are often overseen by part-time administrators who are not environmental professionals, and the pay for the system operators may not be adequate to attract and keep someone with the necessary training and skills. If there are violations, small systems do not have the cash reserves needed to correct the underlying problems, and they may find their ratepayers reluctant or unable to increase their payments." [3,2].

The Inyo County water systems at Laws, Independence, and Lone Pine are precisely in this position. These systems were originally owned and operated by the Los Angeles Department of Water and Power until being transferred to Inyo County by court judgment as part of the Long Term Water Agreement between the City of Los Angeles and it's Department of Water and Power and Inyo County. The Long Term Water Agreement is on Inyo County's website under "Departments-Water". The agreement identified the water rates to be charged as being less than would be charged in Los Angeles. Public Works tried to increase rates in 1999 and only received the service charge increase, not the commodity rate increase. Again, the same thing happened in 2005, but including a yearly cost of living increase to the meter charge.

As an interesting aside, in 1975 AWWA reported that in 1973, the most rural utility customers could pay for water was about $7 per month. If that is escalated to today's costs, that is about $38 per month, which is exactly what our average water rate computes to. This in turn is about 0.9% of the Median Household Income in California. California Title 22 stipulates that Disadvantaged Communities seeking financial aid through the State Revolving Fund program must demonstrate rates equivalent to 1.8% of the median household income, while non-disadvantaged communities seeking SRF assistance must demonstrate rates equivalent to 2% of the state's median household income. Further, the article states that future funding policy criteria should support lowering eligibility requirements for financial aid to low-income residents [6,227].

As was noted similarly by the USEPA, LADWP due to political pressure, charged less than the true cost to operate and maintain the systems. Inyo County can not raise the rates now because citizens have successively mounted a proposition 218 battle in the last year with sewer rates and threatened to mount another Proposition 218 battle if we tyry to raise rates.

Incidentally, how do we prepare economics tables for needs assessments? Can roadway culverts, etc. qualify as flood control projects?
I will be looking at application documents through older, hopefully wiser eyes next funding round.
Many thanks for your time!

Sincerely,

Keith Pearce
Associate Civil Engineer- Water T2 #20529 / D3 #8330
enc.

References:

1. Proposal Evaluation, California Department of Water Resources May 2011

2. 2009 National Public Water Systems Compliance Report-Providing Safe Drinking Water in America

3. 2007/2008 National Public Water Systems Compliance Report-Providing Safe Drinking Water in America

4. 1996 National Public Water Systems Compliance Report-Providing Safe Drinking Water in America

   (http://cfpub.epa.gov/compliance/resources/reports/accomplishment/sdwa/

5. U.S. Department of Labor, Bureau of Labor Statistics Los Angeles-Riverside-Orange Co, CA CPI

6. American Water Works Association Journal, May 1975, Engineering Economics of Rural Systems

7. Bni Building News Public Works 2008 Costbook, 15th edition

8. Implementation Proposal Solicitation Package Proposition 84 August 2010 Round 1